

**Abstract**

The invention concerns a process for the recombinant production and expression of eukaryotic alkaline phosphatase in yeast cells in which in particular a DNA coding for a eukaryotic highly active alkaline phosphatase having a specific activity above 3000 U/mg is used. The invention additionally concerns a process for inserting corresponding nucleic acid sequences into a vector for expression in methylotrophic yeast strains and it concerns appropriate vectors and host strains.